

REMARKS

Claims 1-11, 15-17, and 22-24 remain pending in this application. No claim has been allowed.

Claims 1, 3-6, 10, 11, 15, 16, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Crepy* (6,622,121) in view of newly-cited *Richardson* (5,999,896) and *Raud* (6,125,341). For the reasons set forth below, the applicant respectfully traverses that rejection.

Claim 1 recites a method for testing and improving the performance of a speech recognition engine. The method comprises identifying spoken words and categorizing those spoken words by grammar type. Identified utterances of the same grammar type are grouped together in a grammar sub-tree. The spoken utterances from a particular grammar sub-tree are then extracted and undergo a text-to-speech conversion, providing an audio formatted pronunciation of each utterance in that selected sub-tree. Those audio pronunciations of the utterances in the selected grammar sub-tree are passed to a speech recognition engine, creating a recognized utterance for each such audio pronunciation passed to the speech recognition engine. Each recognized utterance from the selected sub-tree is analyzed with respect to the audio pronunciation from which the created recognized utterance is derived, and a confidence score is assigned.

Crepy, in contrast with the method set forth in Claim 1, tests speech recognition systems by starting with a known reference text (Column 3, Lines 35-37). *Crepy* first converts that known reference text/speech to a digital audio file, and then applies speech recognition software to the digital audio file of that reference text to generate a decoded text (Column 4, Lines 10-12). *Crepy* then assumes the initial known reference text as a known starting point.

Richardson discloses identifying and resolving commonly-confused words during the parsing of an input text (Column 1, Lines 51-53). That reference utilizes a list of sets of commonly confused words (Column 1, Lines 62-63), e.g., the words “ad” and “add”, “cant” and “can’t”, among others; Fig. 4, Column 4, Lines 37-39. Using the confusable-word table, *Richardson* seeks to identify potentially confused words in an input text and to suggest possibly-intended words that may be substituted for potentially confused words (Column 9, Lines 2-6).

What *Richardson* does not teach, however, is what *Crepy* also fails to teach, namely categorizing the utterances by grammar type, and grouping together the same utterances into a grammar sub-tree. Although *Richardson* is cited as supplying that missing teaching, in fact *Richardson* relies on a previously-established table of potentially confused words. Without that table as a starting point, *Richardson* would fail to function in the manner intended by that reference.

In contrast to *Richardson*, the present method as in Claim 1 receives and identifies spoken utterances, and groups together all utterances of the same grammar type into a grammar sub-tree. The method then selects a particular grammar sub-tree, extracts the one or more spoken utterances from that selected sub-tree via a vocabulary extractor module, and performs certain other operations on the extracted utterances as set forth in Claim 1. *Richardson* fails to teach or suggest the foregoing elements as recited in that claim.

Furthermore, *Richardson* is not concerned with any such grouping of utterances into one or more grammar sub-trees. In *Richardson*, the only “grouping” occurs beforehand, namely, by setting up the possibly-confusing word table, which must take place in advance. *Richardson* has no need of the specific categorizing, selecting, or extracting elements, all as recited in Claim 1, and would have provided no guidance to one of ordinary skill with respect thereto.

The applicant acknowledges that one of ordinary skill might well have combined the teachings of *Richardson* with those of *Crepy*. After all, Fig. 2 of *Crepy* also discloses commonly-confused words (“dear” and “deer”). Any such combination by one of ordinary skill, however, would not have included the applicant’s method as set forth in Claim 1. *Raud*, the other secondary reference applied against that claim, would not have guided one of ordinary skill in that respect. Accordingly, Claim 1 is properly allowable over *Crepy* in view of *Richardson* and *Raud*.

The claims depending from Claim 1 are likewise patentable over *Crepy* in view of *Richardson* and *Raud*, for the reasons set forth above.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Crepy* in view of *Richardson* and *Raud*, and further in view of *Bickley* (7,013,276). Claims 8, 17, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Crepy* in view of *Richardson* and *Raud*, and further in view of *Kennewick* (2004/0044516). Claims 9 and 24 are rejected under 35

U.S.C. 103(a) as being unpatentable over *Crepy* in view of *Richardson* and *Raud*, and further in view of *Roberts* (6,999,930). The applicant respectfully traverses those rejections. In each case, the added secondary reference, considered in the overall combination of cited references, fails to supply the teachings of the parent claim as discussed above with respect to Claim 1. Accordingly, those dependent claims are likewise not obvious over the art respectively applied thereto.

The foregoing is submitted as a complete response to the Office action identified above. The applicant respectfully submits that the present case is in condition for allowance and solicits a notice to that effect.

Respectfully submitted,

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